PATENT APPLICATION
DOCKET NO. 200309697-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

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SERIAL NO.: 10/626,360   GROUP ART UNIT: 2853

FILED: July 23, 2003   EXAMINER: Huffman, Julian D.

SUBJECT: METHODS AND APPARATUS FOR SELECTING IMAGE
ENHANCEMENT TECHNIQUES

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U.S. PATENT AND TRADEMARK OFFICE
COMMISSIONER OF PATENTS
ALEXANDRIA, VA 22313

APPELLANTS'/APPLICANTS' REPLY BRIEF

The Appellant filed a revised opening brief on May 15, 2007. The Examiner
responded in an answer mailed August 9, 2007. The following is a reply to the
Examiner's answer.

1. GROUNDS FOR REJECTION TO BE REVIEWED.

A. Claims 1-4 and 6-8 stand rejected under 35 U.S.C 102(e) as being anticipated by USPN 5,930,553 issued to Hirst.

2. ARGUMENT.

A. Ground For Rejection A – Claims 1-4 and 6-8 stand rejected under 35 U.S.C 102(e) as being anticipated by USPN 5,930,553 issued to Hirst.

Claim 1 expressly recites a computer readable medium integrated into a removable cartridge for an image forming device. That medium includes:

1. a plurality of image enhancement data sets including at least one image enhancement data set selected from a group of image enhancement data sets comprising an edge smoothing image enhancement data set, a halftone image enhancement data set, and an imaging material conserving image enhancement data set; and

2. data set selection criteria for use in selecting from among the plurality of image enhancement data sets,

3. wherein at least one image enhancement data set defines at least one condition selected from a group of conditions comprising a first condition associated with the edge smoothing image enhancement data set for use when printing text or line art, a second condition associated with the halftone image enhancement data set for use when printing a halftone image, and a third condition associated with the imaging material conserving image enhancement data set for use when printing a solid area of an image.

To summarize, Claim 1 recites that the computer medium includes a plurality of image enhancement data sets and data set selection criteria. The data set selection criteria is used to select from among the plurality of image enhancement data sets. At least one of the image enhancement data sets defines a condition. Paragraph [0029] of the Specification explicitly defines the term condition as "a circumstance or set of

circumstances that when met indicate the image enhancement technique(s) and any parameter(s) associated with that condition are to be implemented." Paragraphs [0034]-[0035] of the Specification describes an image enhancement data set as a set of data that includes a set of image enhancement techniques and/or parameters for implementing those techniques image enhancement techniques, parameters, and/or selection criteria for selecting an image enhancement technique or for selecting from among image enhancement techniques. Paragraph [0036] describes data set selection criteria as electronic data that can be processed with one or more state variables to select from among image enhancement data sets. Paragraph [0036] goes on to state that as the values of state variables change, processing data set selection criteria will result in a different image enhancement data set being selected.

Answering the opening brief, the Examiner asserts that Hirst, reference 19a of Fig. 2, and column 3, lines 34-54 teach data set selection criteria for use in selecting from among the plurality of image enhancement data sets. Hirst discusses a printer consumable that includes a memory having a segment 19a for storing data such as a version number or manufacture date. Hirst, col. 3, lines 37-40 and Figure 2, item 19a. When the consumable is installed into the printer, the version number or manufacture date is compared with a version number or manufacture date previously stored by the printer. If the consumable has a newer version number or manufacture date, a software patch stored on the consumable's memory such as a color table is installed on the printer. Hirst, col. 3, lines 34-54 and Figure 2. Hirst's version number or manufacture date is used to determine whether or not a software patch found in memory segment 19e is going to be installed.

In other words, Hirst teaches either installing a singular software patch or not. Hirst mentions nothing of using its version number or manufacture date to select **from among** a plurality of software patches. While Hirst notes that the software patch may include look-up tables such as a color look-up tables (Hirst, col. 5, lines 22-23), Hirst mentions nothing of using its version number or manufacture date to select **from among** a plurality of color look-up tables.

Consequently, Hirst fails to teach or suggest a computer readable medium integrated into a removable cartridge for an image forming device where that medium includes data set selection criteria for use in selecting from among the plurality of image enhancement data sets.

Furthermore, in the opening brief, the Appellant explained that Hirst fails to teach or suggest at least one image enhancement data set defines at least one condition selected from a group of particular conditions. While page 5 of the answer restates this argument, the Examiner does not go on to contradict the argument. Instead, at page 4 of the answer, the Examiner asserts that the limitation is taught by Hirst, column 2, lines 46-48 and column 5, lines 19-24.

Hirst, col. 2, lines 46-48 is taken from a paragraph that discusses a memory device in a consumable. The memory device can store data received from a host device. The memory device can also be used to provide software updates to for software programs for a printer's microcontrollers without user intervention. Hirst, col. 5, lines 19-24describes a storage segment in Hirst's memory device. That segment can be used to store patches to update software in a printer. The patches may include color look-up tables.

The passages relied upon by the Examiner mention nothing of a computer readable medium that includes at least one image enhancement data set that defines:

- a first condition associated with the edge smoothing image enhancement data set for use when printing text or line art,
- a second condition associated with the halftone image enhancement data set for use when printing a halftone image, or
- a third condition associated with the imaging material conserving image enhancement data set for use when printing a solid area of an image.

For at least these reasons, Hirst does not teach each and every element as set forth in Claim 1. Hirst's fails to teach the recited data set selection criteria and fails to teach at least one image enhancement data set that defines a condition. Therefore Claim 1 is not anticipated by and is patentable over Hirst as is Claim 4 which depends from Claim 1.

Claim 4 depends from Claim 1 and recites that removable cartridge includes a printing component and that the medium is formatted to store a state variable reflecting a state of the printing component. Claim 4 also recites that the data set selection

criteria represents electronic data that can be processed with the state variable to select from among the image enhancement data sets.

Addressing Claim 4 at page 4 of the answer, The Examiner equates Hirst's version number or manufacture date with the recited state variable. It is noted that with respect to Claim 1, the Examiner appears to have equated Hirst's version number or manufacture date with the recited data set selection criteria. As such, the Examiner's position is not tenable. Hirst's data set selection criteria is not electronic data that can be processed with itself to select from among the image enhancement data sets . As such Hirst fails to teach or suggest data set selection criteria that can be processed with the state variable to select from among the image enhancement data sets in the specific manner recited in Claim 4.

Claim 6 recites a removable cartridge for an image forming device. The cartridge includes a printing component and a memory. The memory is programmed with a plurality of image enhancement data sets as recited in Claim 1. For at least the same reasons Claim 1 is patentable so are Claim 6 and Claims 7-9 which depend from Claim 6.

Conclusion

In view of the foregoing remarks, the applicant respectfully submits that Claims 1, 4, and 6-9 define allowable subject matter.

Respectfully submitted,
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October 9, 2007

APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

1. (previously presented) A computer readable medium integrated into a removable cartridge for an image forming device, the computer readable medium being programmed with and comprising:

a plurality of image enhancement data sets including at least one image enhancement data set selected from a group of image enhancement data sets comprising an edge smoothing image enhancement data set, a halftone image enhancement data set, and an imaging material conserving image enhancement data set; and

data set selection criteria for use in selecting from among the plurality of image enhancement data sets,

wherein at least one image enhancement data set defines at least one condition selected from a group of conditions comprising a first condition associated with the edge smoothing image enhancement data set for use when printing text or line art, a second condition associated with the halftone image enhancement data set for use when printing a halftone image, and a third condition associated with the imaging material conserving image enhancement data set for use when printing a solid area of an image.

2-3. (canceled)

4. (previously presented) The computer readable medium of Claim 1, wherein the removable cartridge includes a printing component, and the medium is formatted to store a state variable reflecting a state of the printing component and wherein the data set selection criteria represents electronic data that can be processed with the state variable to select from among the image enhancement data sets.

5. (canceled)

6. (previously presented) A removable cartridge for an image forming device, comprising:

a printing component that can be utilized by the image forming device to assist in producing a printed image; and

a memory programmed with:

a plurality of image enhancement data sets including at least one image enhancement data set selected from a group of image enhancement data sets comprising an edge smoothing image enhancement data set, a halftone image enhancement data set, and an imaging material conserving image enhancement data set, and

data set selection criteria for use in selecting from among the plurality of image enhancement data sets,

wherein at least one image enhancement data set defines at least one condition selected from a group of conditions comprising a first condition associated with the edge smoothing image enhancement data set for use when printing text or line art, a second condition associated with the halftone image enhancement data set for use when printing a halftone image, and a third condition associated with the imaging material conserving image enhancement data set for use when printing a solid area of an image.

7. (original) The removable cartridge of Claim 6, further comprising a reservoir for holding imaging material, and wherein the printing component can be utilized by the image forming device to assist in producing a printed image using imaging material from the reservoir.

8. (original) The removable cartridge of Claim 7, wherein the memory is formatted to store a state variable reflecting a state of the printing component, and wherein the data set selection criteria represents electronic data that can be processed with the state variable to select from among the image enhancement data sets.

9. (original) The removable cartridge of Claim 7, wherein the data set selection criteria comprises a look-up table containing a plurality of entries, each entry having data representing a state condition and data identifying an image enhancement data set.

10-22 (canceled)